

LABORATORY  
OF THE  
INLAND REVENUE DEPARTMENT  
—  
BULLETIN No. 94.  
—  
CIDER.  
—

W. J. GERALD, Esq.,  
Deputy Minister of Inland Revenue.

OTTAWA, February 6, 1904.

SIR,—In accordance with your instructions of August 4, 1903, a collection was made in November and December last of 41 samples of commercial cider, the whole of which were examined in this laboratory by Mr. J. G. A. Valin, the results of whose work are given in the accompanying tabulated statement.

The specific gravity of these samples, taken at 15.5° C, varies from 1.0025 with 9.54 per cent of alcohol by volume to 1.0688 with only 1.13 per cent. Seventeen out of the forty-one samples contain less than 1 per cent of alcohol by volume, and may be regarded as non-alcoholic. The specific gravities of these vary from 1.0368 to 1.0627, the latter figure being probably higher than the density of pure apple juice. In 1896, I had occasion to determine the gravity of five samples of what was said to be fresh apple juice, made at Lambeth near London, Ont., for the production of cider vinegar. They ranged from 1.0464 to 1.0485 at 18° C. Two samples of apple juice 'fresh from the press,' intended for the manufacture of cider, were supplied to this laboratory in October, 1903, and after filtration found to have specific gravities respectively of 1.0546 and 1.0573 at 15.5° C. Having in view these variations it would seem necessary to obtain, at the place of production, undoubtedly genuine samples of 'fresh and pure apple juice before drawing any conclusions regarding the samples described in the tables as to their containing added water or sugar.

It will be observed that fourteen of these ciders have been found to contain small quantities of salicylic acid, the addition of which to alcoholic fermented or other portable liquors renders them, according to the Adulteration Act, liable to be considered as adulterated in a manner injurious to the health.

I have the honour to be, sir,  
Your obedient servant,

THOMAS MACFARLANE,  
Chief Analyst.

## Samples of Cider.

## RESULTS OF ANALYSIS.

Sp. Gr. of Sample.	Sp. Gr. of Distillate.	Alcohol by Volume.	Sp. Gr. of Residue.	Total Solids by Balling's Table.	Sugar by Fehling.			Acidity stated as Malic Acid.	Presence of Salicylic Acid.
					Reducing Sugar stated as invert.	Reducing Sugar after inversion.	Cane Sugar.		
1-0265	0-9930	p. c. 5-00	p. c. 1-0332	8-244	p. c. 6-30	p. c. 6-39	p. c. None.	p. c. 0-72	None.
1-0324	0-9960	2-30	1-0300	8-081	4-72	4-72	None.	0-87	"
1-0228	0-9048	3-09	1-0272	6-780	3-18	4-08	0-86	0-87	"
1-0106	0-9926	5-32	1-0203	5-075	0-99	2-33	1-27	0-87	"
1-0042	0-9910	5-86	1-0108	2-700	0-68	0-88	0-19	0-58	"
1-0301	0-9979	1-42	1-0322	8-000	4-35	6-70	2-23	0-56	Present.
1-0407	0-9955	3-21	1-0446	11-000	8-65	9-72	1-02	0-53	None.
1-0366	0-9947	3-76	1-0410	10-142	8-16	8-16	.....	0-63	"
1-0548	0-9996	0-26	1-0532	13-523	8-00	10-33	2-13	0-58	Present.
1-0451	0-9992	0-53	1-0453	11-106	"	"	"	0-57	None.
1-0546	0-9997	0-20	1-0546	13-381	7-68	9-79	2-00	0-60	Present.
1-0364	0-9998	0-13	1-0566	13-857	7-87	12-78	4-60	0-60	"
1-0331	0-9953	3-25	1-0308	8-706	6-22	7-46	1-18	0-62	None fermented.
1-0110	0-9993	7-92	1-0225	5-625	2-35	2-72	0-35	0-88	None.
1-0040	0-9916	6-10	1-0124	3-100	0-92	0-99	0-07	0-70	"
1-0029	0-9883	8-80	1-0-39	3-475	1-55	1-55	.....	0-46	"
1-0027	0-9924	5-47	1-0097	2-425	0-57	0-59	.....	0-58	"
1-0524	0-9989	0-73	1-0544	13-333	5-37	6-09	0-68	0-57	"
1-0038	0-9875	9-45	1-01-5	3-625	0-78	0-85	0-06	0-58	None.
1-0562	0-9904	0-40	1-0569	13-928	8-80	8-80	.....	0-53	Present.
1-0408	0-9973	1-88	1-0426	10-523	8-05	8-14	0-08	0-90	None.
1-0115	0-9925	5-63	1-0195	4-875	1-68	1-88	0-18	0-58	Traces fermented.
1-0-0		0-53	1-0582	14-238	9-09	11-32	2-19	0-56	Present.
1-0		1-13	1-0705	17-113	10-94	14-94	3-80	0-72	"
1-0538	0-9997	0-20	1-0588	14-381	9-46	13-35	2-75	0-58	"
1-0637	0-9997	0-20	1-0637	15-534	6-22	7-93	1-62	0-58	"
1-0558	1-000	.....	1-0558	13-666	6-14	11-54	5-13	0-58	"
1-0276	0-9954	3-28	1-0319	7-925	5-96	6-54	0-55	1-28	None.
1-0530	0-9997	0-20	1-0530	13-000	9-16	10-29	1-45	0-75	Present.
1-0531	0-9999	0-07	1-0531	13-023	6-02	9-02	2-84	0-46	None.
1-0398	0-9949	3-62	1-0443	10-928	7-71	7-71	.....	0-87	"
1-0025	0-9874	9-54	1-0155	3-875	1-77	1-77	None.	0-57	"
1-0552	0-9995	0-33	1-0553	13-547	3-43	6-20	2-63	0-57	Present.
1-0570	1-000	None.	1-0572	14-000	8-53	11-82	3-12	0-58	"
1-0562	0-9997	0-20	1-0565	13-833	8-31	11-73	3-24	0-58	"
1-0333	0-9951	3-49	1-0383	9-488	7-27	7-78	0-48	0-58	None.
1-0555	0-9996	0-26	1-0560	13-714	9-04	10-50	1-39	0-70	Present.
1-0352	0-9922	5-63	1-0427	10-547	5-62	8-39	2-63	0-74	None.
1-0368	0-9989	0-73	1-0384	9-512	4-86	8-79	3-72	0-57	"
1-0045	0-9913	6-32	1-0131	3-275	0-63	0-63	.....	0-97	"
1-0476	0-9981	1-26	1-0495	12-186	7-05	10-11	2-90	0-76	"



